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ABSTRACT

This paper argues that social demands on the educational system have changed dramatically in the course of the past few years. A more affluent American society is now demanding that education provide a medium where excellence can be attained by the most able students and a certain minimum level of competence is attained by students who are less academically inclined or less gifted. No longer can the system afford to act merely as a sorting device, certificating the better-motivated and academically inclined Americans. We are making a major financial sacrifice to extend years of schooling to the majority of the population and we want assurance that these additional expenditures will pay off in increased performance for those who are forced to attend school longer. There is now an almost universal demand for a drastic reduction in the number of semi-illiterates and for general mastery of simple mathematics. What is not too clear is how to meet these goals. Different groups in our society have placed demands on the schools which are not only overlapping, but sometimes inconsistent. Most often, the schools have been asked to perform those functions which the family was least capable of providing. Such diverse expectations not only influence the programs of different educational institutions which cater to groups with different socio-economic compositions, but give rise to strident attacks on the system. (Author/JM)

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2d Session

COMMITTEE PRINT

GOALS AND ALTERNATIVES FOR THE EDUCATION OF MINORITY GROUP STUDENTS IN ELEMENTARY AND SECONDARY SCHOOLS

SELECT COMMITTEE ON EQUAL EDUCATIONAL OPPORTUNITY UNITED STATES SENATE

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FOREWORD

In the course of its two-year inquiry into equal educational opportunity in our Nation's public schools, the Select Committee has requested a number of outside consultants to prepare studies for the Committee's use.

One of these reports, "Goals and Alternatives for the Education of Minority Group Students in Elementary and Secondary Schools" by Joseph Froomkin, Inc., examines present and proposed methods of improving the delivery of educational services to minority children. It is reproduced in this Committee Print for the use of the Committee and others who may wish to review its findings and conclusions.

WALTER F. MONDALE,
Chairman, Select Committee on
Equal Educational Opportunity.

GOALS AND ALTERNATIVES FOR THE EDUCATION OF MINORITY GROUP STUDENTS IN ELEMENTARY AND SECONDARY SCHOOLS

by

Joseph Froomkin Inc.

A Report Submitted To
the Select Committee on Equal Educational
Opportunity Of The United States Congress

January 1972

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INTRODUCTION

An objective, dispassionate statement about the goals and the needs of the educational system in meeting the needs of disadvantaged students and minorities during the 1970's is practically impossible today. The whole educational process is in the vortex of controversy. Of course, controversies and crises in education are not new, but this one is more serious. American education is now being questioned, attacked and criticized more vigorously than ever before. The present crisis is more far-reaching than the crisis of quality which the American college and high school had to face in the early 1960's, when the content and method of instruction in the sciences were found wanting and reformed post-haste. It is also more fundamental than the crisis of the late 1960's, when the system struggled to digest increased enrollments in high schools and growing workloads swelled the outlays of the educational system at an unprecedented rate.

In the 1970's the system is being challenged in a more fundamental way: (1) Internal financial pressures for higher teacher salaries, additional services and continuously increased coverage are escalating. These pressures are countered by the taxpayers' and legislatures' reluctance to allocate more money for educational purposes; (2) social pressures are mounting to change the educational system so that it becomes more effective in teaching the children of minorities and the poor.

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While much of the energies of the professionals, superintendents and school board members has been focused on keeping the system financially afloat, critics of the system have raised their voices to point out that the educational system has been unresponsive to the needs of the poor, administratively cumbersome and, oftentimes, unnecessarily repressive. It is ironic that, as the American educational system reached a point in its development where it delivered on a mass scale the kind of services which it was capable of delivering, the ground rules for evaluating the system changed dramatically, and it was found wanting again.

This paper will argue that social demands on the educational system have changed dramatically in the course of the past few years. A more affluent American society is now demanding that education provide a medium where excellence can be attained by the most able students and a certain minimum level of competence is attained by students who are less academically inclined or less gifted. No longer can the system afford to act merely as a sorting device, certificating the better-motivated and academically inclined Americans. We are making a major financial sacrifice to extend years of schooling to the majority of the population and we want assurance that these additional expenditures will pay off in increased performance for those who are forced to attend school longer. There is now an almost universal demand for a drastic reduction in the number of semi-illiterates and for general mastery of simple mathematics.

What is not too clear is how to meet these goals. Different groups in our society have placed demands on the schools which are

not only overlapping, but sometimes inconsistent. Most often, the schools have been asked to perform those functions which the family was least capable of providing. Thus, Willis W. Harman, Director of the Educational Policy Research Center, Stanford Research Institute, has identified the different educational demands by different substrata of the population as follows:

*The poor and the disadvantaged demand effective teaching of cognitive skills and the development of achievement motivation to help their children blend into the mainstream of American life.

*The status-quo oriented "Middle America" would like schools to be centers of competent teaching of traditional content. It also wishes schools to have an important role in transmitting traditional American ideals.

*The "materialistic/esteem-oriented" group, which may be roughly said to describe the socially fluid white collar class, expects schools to provide technologically progressive but structured education which allows for diversity of goals and processes. It also demands special attention to the gifted.

*Finally, the humanistic, process-centered group wants the schools to have diversity, freedom of expression, and emphasis on creativity and personal development. It hopes that education will expand its horizons to meet these goals.

Each group stresses the feature of education which it feels is essential for their children's success in our society. The poor, who experience the most difficulty with teaching the "three R's" at home, put this item on the top of their agenda. At the other end of the spectrum, the intellectuals, whose children seldom have any difficulty with basic education, desire the school to be a microcosm of the society of tomorrow.

These diverse expectations not only influence the programs of different educational institutions which cater to groups with different socio-economic compositions, but have given rise to strident attacks on the system. The parents in the black ghettos accuse the schools of failing to teach their children. Blue-collar parents are shocked at eclectic history instruction which questions the United States' motives in the Spanish War. Romantics, such as Kozol and Kohl, direct their invectives at the repressive atmosphere in the classroom. In the midst of this grand-standing, which cannot be called an exchange of opinion or a dialogue, since the participants have not listened to one another, educators have tended to become more defensive. They champion the application of more resources and hope that by doing more of the same, but better, they can meet the demands placed on the system.

Since the beginning of the 20th Century, educators have stressed the potentially important socializing effects of the school rather than mastery of subject matter. Yet they have been unwilling to face up to the evidence that social values are not likely to be imparted

in the chaos of an underachieving classroom. Since the teaching of complex concepts does not go over well when students are lagging in basic skills, it can be argued that a higher priority must be placed on imparting these skills.

The mission of the school in an egalitarian society has been debated, but not resolved. The intellectual-romantic movement argues that schools do not teach the poor, and that as long as they fail on that score, they may just as well stop being repressive and destructive of personality. This is a defeatist attitude. Unfortunately, other educators have not documented an alternative new structure for schools that would be effective for the poor and for slow-learners, one which would develop children to their maximum.

What Happened in the 1960's

To a large extent, the pressures and the discontent which have engulfed the educational system follow directly from the successes of the system during the 1960's. As a series of more mundane problems was solved, and our understanding of the operations and effectiveness of the system improved, more difficult problems were placed at the door of the educational establishment.

The immediacy and the acuteness of the controversy must be linked to the fact that the educational system has become so much more universal. For instance, among the very young, those under six, who were spottily, if at all, enrolled in formal educational pr ams, the percentage of three-year-olds attending school increased from 4 per cent of eligibles in 1964 to 9 per cent in 1969. The attendance of children of poor

parents[1] increased from 2.5 per cent of the total to 6.6 per cent in the same time period. An equally significant increase occurred in the attendance of four- and five-year-olds. Attendance of four-year-olds increased from 15 per cent of the total number in 1964 to 23 per cent in 1969. For five-year-olds, the increase during this period was from 58 per cent to 77 per cent.[2]

The elementary school coverage was already well-nigh universal in 1960. During the past decade, increased attention was paid to children with special problems, the migrants and others who were missed by conventional schooling.

A dramatic change in enrollment trends occurred on the secondary school scene. High school, which at the beginning of the 1960's was a class institution, increasingly became a mass institution. A fifth grader in 1953 had a 62 per cent chance of graduating from high school in 1960. By 1970, the chances that a fifth grader would graduate from high school were close to 76 per cent.[3] According to census surveys, 38.4 per cent of all 18- and 19-year-olds were in school in 1960. This percentage increased to 53 in 1969, the last year for which the data is available. It appears that not only does a smaller proportion

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1. Children from families with incomes of less than $5,000.

2. U. S. Department of Commerce, Bureau of the Census, School Enrollment in the United States: 1969, Series P-20, No. 199 (April 22, 1970).

3. F. A. Simon and W. A. Grant, Digest of Educational Statistics, 1970 Edition, U. S. Department of Health, Education, and Welfare, Office of Education, National Center for Educational Statistics (Washington, D.C.: Government Printing Office, 1970), p. 9.

of our population drop out of high school, but it drops out later during the life-time of the student. At least 50 per cent of the high school dropouts are 18 at the time they drop out.[1]

If the high schools became democratized, post-secondary education changed even more rapidly, becoming increasingly popular among the less affluent. Between 1960 and 1966, the aspiration to attend post-secondary institutions doubled among high school graduates whose family income placed them in the lowest quartile of the income distribution. By contrast, the aspirations of children whose parents were in the top quartile increased only 10 per cent. For the first time in recent United States history, the gap in aspirations for college tended to narrow between the rich and the poor (see Table 1).

This revolution in aspirations gives some interesting, though far from definitive, insights about dropout patterns of students in the twelfth grade. Such insights can be gained by relating changes in dropout rates to aspirations to attend college.

In 1960, the high school population could be divided into two groups: (1) children from the top two income quartiles, at least 50 per cent of whom aspired to go to college, and (2) children from families in the lower half of the income distribution, less than a third of whom planned to go on to college. The dropout rate in the first group was three times less than that in the second group.

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1. U. S. Department of Commerce, Bureau of the Census, Current Population Reports, Series P-20, Nos. 167 and 190 (Washington, D.C.: Government Printing Office).

TABLE 1

COMPARISON OF HIGH SCHOOL SENIORS' COLLEGE PLANS, FALL 1959 AND 1965, ADJUSTED FOR FAMILY INCOME CHANGES, 1959-1965, IN INCOME DISTRIBUTIONS

(Percent)

Adjusted Family Income		Percent "Yes" for College Plans	
1959	1965		
Under $3,000	Under $4,000	1959	23
		1965	46
Percent change			+23
$3,000-4,999	$4,000-5,999	1959	40
		1965	52
Percent change			+12
$5,000-7,499	$6,000-8,499	1959	52
		1965	65
Percent change			+13
$7,500 and over	$8,500 and over	1959	68
		1965	74
Percent change			+ 6

Source: Joseph Froomkin, Aspirations, Enrollments, and Resources: The Challenge to Higher Education in the 70's, U.S. Department of Health, Education, and Welfare, Office of Education (Washington, D.C.: Government Printing Office, 1970), Chapter 2.

By 1967, dropout rates still divided the high school population into two groups, but these groups had changed. The group with the low dropout rate now included children from all three top income quartiles, and the high dropout rate, still similar to that of 1960, was not limited to children in the lowest income quartile of the population. The level of aspirations for a college education among children in the third income quartile in 1967 was equal to that among children in the second income quartile in 1960. The implication that the incentive of going to college was influencing high school completion rates is compelling. It is further confirmed by the experience of Upward Bound programs, which have succeeded in graduating a very high proportion of their participants by holding the carrot of college enrollment in front of them.

The combination of increasing enrollments (caused partially by the baby boom, and partially by increased propensities to stay in school) and escalation in the cost of educating students caused an important swelling of education budgets. In 1959-1960, total current expenditures of public elementary and secondary schools amounted to $12.5 billion. This expenditure more than doubled to $34.5 billion by 1969-1970. In real terms, the cost per student in regular school programs of educating an elementary and secondary student went up from $375 in 1959 to $771 in 1969-1970 (see Table 2).

In elementary and secondary education, part of the increase in total cost was due to increased enrollments (some 25 per cent more students were enrolled in 1970 than in 1960), part to the lowering

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TABLE 2

ELEMENTARY AND SECONDARY EDUCATION EXPENDITURES BY PURPOSE AND SOURCE OF FUNDS, 1966 TO 1970[a]
(Amounts in Millions)

Year and Source	Total	Current Funds			
		Total Current	Instructional Salaries	Other Instructional Costs	Other Pupil Costs
1965-66					
Total	$25,771	$21,225	$13,068	$1,377	$3,284
Federal	1,883	1,478	747	203	167
State	9,704	9,198	5,887	584	1,454
Local	14,184	10,549	6,434	590	1,663
1966-67					
Total	28,106	23,501	14,101	1,596	3,988
Federal	2,042	1,823	941	226	207
State	10,403	9,874	6,144	672	1,689
Local	15,661	11,804	7,015	698	2,092
1967-68					
Total	31,766	26,533	15,973	1,902	4,386
Federal	2,233	2,048	1,108	236	227
State	12,055	11,471	7,188	801	1,908
Local	17,477	13,014	7,677	865	2,252
1968-69					
Total	35,397	29,728	17,972	2,231	4,734
Federal	2,199	1,963	1,058	189	248
State	13,453	12,854	8,080	937	2,054
Local	19,745	14,911	8,834	1,105	2,432
1969-70					
Total	39,504	33,348	20,249	2,488	5,138
Federal	2,465	2,260	1,294	182	272
State	15,011	14,385	9,114	1,048	2,233
Local	22,029	16,703	9,841	1,258	2,633

Year and Source	Current Funds				
	Plant Operation and Maintenance	Administration	Other Current[b]	Capital Outlay	Interest
1965-66					
Total	$2,386	$ 763	$ 347	$3,755	$ 792
Federal	100	61	201	405	
State	902	310	61	486	20
Local	1,384	392	85	2,864	772
1966-67					
Total	2,565	846	405	3,700	905
Federal	111	86	251	219	
State	943	362	65	506	23
Local	1,511	398	89	2,975	882
1967-68					
Total	2,767	1,029	474	4,256	978
Federal	117	104	255	186	
State	1,068	421	85	560	24
Local	1,583	504	134	3,510	954
1968-69					
Total	3,094	1,127	570	4,654	1,015
Federal	121	100	247	236	
State	1,191	471	120	575	24
Local	1,782	556	202	3,843	991
1969-70					
Total	3,435	1,288	750	4,974	1,181
Federal	125	105	281	205	
State	1,324	507	160	600	25
Local	1,986	676	309	4,169	1,157

a. Public schools only. Excludes funds for state administration.

b. Excludes expenditures for community colleges by local school systems.

Source: U. S. Office of Education (unpublished estimates).

of student/teacher ratios (some 50 per cent more teachers were employed in 1970, as compared to 1960), and part, most importantly, to increases in personnel and material costs. Most notably, between 1960 and 1970, median teacher salaries increased 58 per cent.

Research and development in education became a large scale activity for the first time in the 1960's. Building on a miniscule, almost nonexistent base, expenditures for education-oriented research went up to $100 million by the end of the 1960's.

What We Learned During the 1960's

The two most important educational findings in the 1960's documented what a large number of psychologists have long suspected: (1) experiences during the very early years, from birth to four or six years, are crucial in determining achievement in later life, and (2) our schools were most effective in delivering knowledge to the children of rich, educated parents, being much less effective with the children of the poor. Contrary to popular impression, the polarization between the achievement of the rich and the poor did not increase during the elementary and secondary school years. The poor simply stayed the same number of standard deviations behind the attainment of the rich throughout their school careers.

Despite Benjamin Bloom's documentation that the very earliest years of human life affect human characteristics most drastically, and that the crucial years of learning occur early in life when language and reasoning develop most rapidly, both policy-makers and educators have been slow to apply this lesson and make it part of educational

practice. During the initial years of Operation Head Start, for instance, most of the children enrolled in that program were five or six years old. Few, if any, federal programs sponsored systematic methods of cognitive stimulation for the young children of the poor.

Without a set cognitive goal, early childhood programs concentrated on other objectives: health, nutrition, social adjustment, etc. These objectives are very important in the development of a child; they need not be slighted in pre-school programs that also have short units aimed at developing the language and reasoning abilities of young children. However, by themselves they cannot be expected to close the achievement gap between the poor and the rich.

The voluminous documentation compiled during the 1960's about the consistently lower attainment in school of children of less educated, and presumably poorer parents, compared to those of the rich, stimulated increasing concern about school effectiveness. An inkling of these differences in achievement could have been gained from an early study sponsored by the Office of Education, Project Talent, which found that in the tenth grade, 60 per cent of the children of the affluent (those whose socio-economic status placed them in the upper quartile) achieved in the top quarter of the class, while 60 per cent of children in the lower socio-economic quartile were in the bottom quartile. The Equal Opportunity Survey documented this disparity for other grades. Children of parents with less than a grade-school education started 1.2 standard deviations behind, and remained that way throughout their school career. Thus, school could be considered a neutral agent in the

children's intellectual development. It did not equalize the disparities between the rich and the poor, nor help the less gifted catch up with the most gifted (see Table 3).

These findings, which attack one of our fondest assumptions about the school's role as a catalyst for social mobility, became much less surprising as more light was thrown upon the effectiveness of the American educational system. The international comparison of mathematical achievement in 12 countries showed that students here were performing rather poorly in comparison to the children of most other countries. Despite the fact that American teachers had many more years of preparation, our school children were learning less.[1]

A number of hypotheses have been advanced for this failing of our schools. Mathematics was less highly regarded in American homes than in the homes of students in other countries; teachers abroad were prepared in the subject-matter discipline, while teachers here were trained primarily in techniques; the organization of the school was such as to discourage learning; and, finally, the international tests did not cover what was being taught in our schools.

While the first three observations are probably valid, the fourth is not, unless the experts who made up the test are to be faulted for their judgment of what is important in mathematics. Unless we accept becoming--comparatively--a nation of dumb yokels, it may be well to: (1) bring home and school closer together, (2) reform the preparation of teachers, (3) change the classroom climate to make it more conducive to learning, and (4) take another hard look at our curriculum coverage.

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1. T. Husen, editor, International Study of Achievement in Mathematics (New York: John Wiley, 1967), Table 1.1.

TABLE 3

ACHIEVEMENT MEANS OF STUDENTS BY EDUCATIONAL ATTAINMENT OF FATHER
ADJUSTED FOR NO-INFORMATION GROUP: FOR SEVERAL GRADES

Fathers' Education Category	Achievement Mean of Students				
	Grade 1	Grade 3	Grade 6	Grade 9	Grade 12
None or some grade school	43.765	43.210	43.934	44.569	45.197
Completed grade school	47.336	47.279	46.415	48.267	58.161
Some high school but did not graduate	49.042	48.178	49.364	49.109	48.962
Graduated from high school	52.711	52.197	52.197	52.147	51.992
Some college but less than four years	54.557	54.780	54.099	54.662	54.323
Four or more years of college	55.817	56.649	55.329	56.461	55.980

Note: For total, Mean 50.0, Standard Deviation 10.

Source: Adapted from Inequality: Studies in Elementary and Secondary Education, eds. Joseph Froomkin and Dennis J. Dugan, Chapter II; C. Marston Case, "A Revision of the Equal Opportunities Survey Estimates of the Relationship Between Child's Achievement and Father's Education," U.S. Department of Health, Education and Welfare, Office of Education, 1969 (mimeographed).

Of these four objectives, only the last one has been attacked on a large scale in the United States. The reform in the science and mathematics curriculum, spearheaded by the National Science Foundation, and later supported by the United States Office of Education, has been successful in bringing new programs to the attention of educators. Unfortunately, as the more rigorous programs were introduced, the percentage of eligible high school children who opted to follow these courses declined. Thus the challenge to produce courses which are universally acceptable, as well as rigorous and effective, remains.

This should come as no surprise to those who have watched the development of instructional methods and media during the past decade. Most evaluations of the programs that use new methods, such as individually prescribed instruction, or new media such as television, have indicated that the achievement of the control and experimental groups were not significantly different, or that the achievement of the experimental group was not too different from what might have been expected with conventional programs. Media innovations have often contributed to making a course more interesting and have sometimes improved coverage, but they have not affected the learning of basics that are covered by tests.

In some instances, when the results were statistically significant, the gains were so small as not to be significant from a behavioral standpoint. For example, a gain of five points on an achievement test for a population which lagged by nearly 25 points is not a solution!

Given the negative findings on most experimental programs, we should not have been too disappointed by the negative results of most mass interventions to affect the learning rate of lagging students in our remedial programs. It will be remembered that the majority of Head Start programs did not affect the cognitive ability of their participants. Even in the case of successful experimental programs, the cognitive gains appear to have been ineffective in raising permanently the average attainment of the poor.[1]

I believe that by now the following hypothesis can be plausibly advanced and needs rigorous testing: (1) the school is not a closed learning system; the influence of the family is pervasive, (2) our present instructional technologies (I would like to define technologies very broadly to encompass teaching methods, organization of the classroom, as well as the use of materials) are not equal to the task which has been given to them, namely, neutralizing or offsetting the deleterious influences of the environment, and (3) the causes and the dynamics of school failure have not been analyzed imaginatively enough to allow us to prescribe different, effective, remedies for academic retardation that is due to varying causes. The failures that are due to a lack of motivation have not been separated from those due to a slower learning rate, for instance. The dynamics of effective instruction for children who have varying learning rates in different subjects have not been identified precisely enough.

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1. See Westinghouse Learning Corporation/Ohio University, The Impact of Head Start, 1969 (mimeo).

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Our failures have been sufficiently documented. Negro students lag behind whites. The achievement of students in cities lags behind that of students in the suburbs. Students in rural areas lag behind those in the cities.... The real challenge is to narrow these gaps (see Table 4).

Where Do We Go From Here?

There is no doubt that, on the whole, our understanding of the educational process has been greatly enhanced during the 1960's. Nor is there any doubt that we have raised more questions than we can answer. If we are to move forward in improving the educational environment, the first priority is to answer some of the more fundamental questions about the role of the school in our society.

Probably the most important single question which will need resolution in the 1970's is the role which education can play in bringing us together. This question has many facets. The most important of these is integration of the nation's schools. We learned from the Coleman Report that racial and social integration can contribute to a better learning climate. We have not learned, as yet, how to bring about this integration. Studies by social scientists have pointed out the crucial role which Boards of Education play in making integration possible. This points to the need to concentrate our efforts on educating school boards in the process of bringing integration of the schools to their communities.

In the fight against academic retardation, educators are likely to be more successful if they do not rely upon conventional practice, but analyze carefully the causes and cures of our pathology in education,

TABLE 4

A COMPARISON OF STUDENT ACHIEVEMENT: BASED ON ACHIEVEMENT DISTRIBUTION OF SUBURBAN STUDENTS

Type of Residence	Compared to Suburban Student Achievement		
	Below Lowest Quartile	Below Median	At Upper Quartile
	(per cent)	(per cent)	(per cent)
Central City	39	65	15
Urban Fringe	25	50	25
Outer Urban	28	54	22
Rural Non-Farm	37	62	16
Rural Farm	47	73	10

Source: Based on statistical information taken from unpublished data in the Educational Opportunity Survey, 1966. Achievement measures pertain to 9th grade students and the type of community in which they have lived most of their lives.

and then try to formulate solutions which are consistent with theories of human development. In too many instances we have relied upon tried, but ineffective, solutions. We have rushed to provide to problem segments of our population whatever services we knew how to perform, without worrying too much about their effects.

Take, for instance, the increasing emphasis upon remedial services to reduce the variability in educational outcomes between the poor and the rich. We have too seldom asked ourselves to diagnose the reason for this variability. Is it physiological, psychological, motivational, or due to differences in the total resources which are expended upon a child's development? Nor have we asked ourselves realistically at what stage of the child's development one should start the massive effort to "fix" the condition, nor, if the condition is chronic, what resources should be applied to keep it in check.

In the first place, the diagnosis of certain physiological conditions, such as deficiencies in hearing, should, according to modern medical theory, be done during the very first days or months of life. Even with imprecise tests, high-risk populations may be identified for additional testing and early remedial therapy (often mechanical, e.g., hearing aids). Other conditions, such as minimal brain dysfunction, can be diagnosed well before a child enters kindergarten so that he may benefit from special training before he enters first grade. This is clearly a health measure, and one which, if adopted universally, might cost up to $4 billion a year. While I do not believe that this outlay should be charged to education, its cost/effectiveness is so high that it seems appropriate to mention it here.

It would also be highly desirable to test segments of the population which may have potential learning difficulties--who may be slower learners than the average--and may need early intervention to improve their learning ability. Our tests for this purpose are still extremely imprecise, and we urgently need to develop better tests.

All these tests would have limited use unless programs are developed to help the children who are diagnosed as bad learning risks.

There is a sufficient body of theory, some of which has been tested extensively, to offer guidance and justify early learning programs. The malleability of children in their very earliest years, when their learning characteristics are developing most rapidly, has been documented convincingly. The attributes which make for good learning progress in later life--language, concept development, attention span, etc.--have been identified. Several programs which show promise have been developed by early childhood educators.

However, the unwary reader should be cautioned that not all highly touted early childhood programs have been effective. Only those which are based on a consistent theory of child development which goes beyond the unsophisticated notion that everything will happen by itself whenever the child is "ready" have shown encouraging results. The smorgasbord programs which borrowed features from many programs because these appealed intuitively to non-rigorous practitioners have had the most disappointing and equivocal effects.

The programs themselves have been the source of a great deal of controversy among pre-nursery and nursery school educators. The argument has been advanced that cognitively-oriented programs are inimical to the child's social and emotional adjustment to the world. The impression was given that the choice was between "developing the whole child" and "learning." Actually, nothing could be further from the truth. Effective cognitive units, some in the form of games, need not take more than a few minutes to an hour a day. Many of the more effective units need not even be conducted in classrooms. Methods have been, and are being, developed to teach parents ways of doing a better job of intellectually developing their children.

Generally, these methods have been oriented to helping poorer and minority parents. Somewhat more affluent parents of children born with learning disabilities are less well served by research and service components for early remedial learning. It would be well to close this gap in the 1970's.

Roughly 5 million children between the ages of two and six are not given adequate intellectual stimulation during their early years. Probably 80 per cent of them come from disadvantaged backgrounds. These could benefit not only from cognitive stimulation programs, but also from a more integrated program to enrich their experience so that the deleterious effects of home environment would be mitigated. The cost of such a program would be quite high. Probably the bill would be $6.5 billion for the poor, in 1970 prices, and another $0.5 billion for the affluent.

The cost of not undertaking such a program is higher still, if Benjamin Bloom's curve for the development of cognitive abilities is to be trusted. The urgency of early childhood intervention can be illustrated in a frightening way. Intervention in the second year is 30 per cent more effective than in the fourth year, and 15 times more effective than at age six.

The failure of mass programs of what has been called early childhood intervention has brought about a great deal of discouragement. Some government officials have even stated that these programs should be kept for their non-cognitive benefits, i.e., nutrition, dental care, or the "civilizing" effect of pre-school experience. It should be clearly understood that this position (1) votes for perpetuating the differences in achievement between the rich and the poor, and (2) is based on the experience of non-structured, uncontrolled experiments, most of which started too late for the children to be affected positively.

If we are to develop an effective mass remedial program, it is essential that we start early. It is probably equally necessary to continue the effort throughout the child's school career. It is not at all clear that once achievement or learning rates are brought up to a higher level in the earlier years, they are likely to continue at that higher rate if the remedial effort is not sustained. Preliminary indications are that they do not. While some have argued that this subsequent decline is proof enough of the ineffectiveness of early childhood programs, this point of view can be justified

only if one assumes that all the learning occurs in school. Were one to postulate, in line with the findings of Project Talent and the Equal Opportunity Report, that the family plays an important part in the learning process, one would not be surprised to find that children from deprived backgrounds who benefited from early childhood programs lost their advantage once the supportive services were withdrawn.

What kind of supportive services are necessary, and in what quantities, is still a moot question. After a child enters primary school and goes beyond first or second grade, the desire to learn may start playing as important a role in determining achievement as learning ability. Most remedial programs do not differentiate between these two blocks to achievement. Nor do they face up to the problem of different rates of retardation; nor do they take psychological problems seriously.

Especially in federal programs, such as Follow-Through, which was supposed to build on the gains of Head Start, the characteristics of the students were not taken into account in offering the remedial approaches. Community representatives were allowed to vote on choosing a program from an ideologically inconsistent menu provided by the Office of Education. No advice was given as to which program might be most appropriate.

Both children and their parents, the taxpayers, deserve better than what has been done in the field of remedial education. The reading test scores of children in Title I programs indicate that

very little change has occurred in the scholastic attainment of the poor as a result of this effort. Granted that these test results are fragmentary and report on achievement in only a small proportion of the projects, it is most likely that only the better projects administered the tests. Hence, other projects probably showed even bleaker achievement gains. In 1967 and 1968, less than one-fifth of Title I participants achieved a significant gain in reading; two-thirds showed no change, and the rest experienced a loss.

It is also interesting to note that the majority of goals were attained in the higher grades. This is contrary to popular impression. Thus, it would appear that Title I programs which motivated older children were more successful than remedial programs at a lower age.

A look at both successful and unsuccessful programs about which reports are available shows very little difference between the two. Title I programs which were analyzed during the 1968 and 1969 period show gains in some grades and losses in others from identical programs.

The inescapable conclusion from this analysis is that different approaches to remediation are needed at different grade levels. Even more importantly, the remediation methods need to be more closely attuned to the extent of retardation. The most recent OE programs for the education of disadvantaged children suggested that the effective programs were generally dealing with children who lagged but little behind national norms. Another study of Title I experience, this one conducted by GE Tempo, came essentially to the same conclusion on the basis of a survey of a more representative national sample.

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The challenges which face educators in reducing the avoidable variability between children are:

(1) To produce a set of replicable remedial programs which will apply to children at different grade levels and different degrees of retardation.

In all probability, successful and replicable programs can be developed only if they are based upon sound theories of learning. One of the reasons why present programs are so hit-and-miss is that they are based on intuition and acceptable practice. More will be said on this topic in a discussion of research goals.

(2) To make a clear distinction between motivational and remedial programs.

In certain situations, the lagging achievement of students is due to their slower learning rates. In others, the inability to learn is due to motivational causes. Different programs are needed for these two groups. While the first group can probably be helped by more effective learning environments (more suitable curricula, more effective teachers, different learning approaches), the second group is more likely to be helped by plain incentives to learning. We have witnessed what the possibility of going to college did to the dropout rate. Yet, despite some successful experiments in which students were given incentives, either for achieving at certain rates, or for coaching other students, the practice of motivating the students with money has not caught on.

(3) To develop enrichment programs for infants and very young high risk children, with a choice of follow-through programs to retain whatever gains are produced by the early program.

These programs are different from remedial programs for children who have not benefited from enrichment at an early age. The remediation programs oriented to children with a slower learning rate may prove very different from those aimed at maintaining a learning rate brought about through early enrichment.

It is virtually impossible to attempt to set forth a budget for enrichment and remedial activity. The experience to date has indicated that some programs which spent as much as $1,000 to $1,500 per child had few noticeable results. By contrast, a number of pre-school experimental programs which cost no more than $500 to $800 a year did have positive results. With older children, the most popular figure for the cost of remedial programs is $250 per year. Again, some programs costing that amount had little effect. Also, a number of programs costing no more than $150 per child appear to have been effective.[1]

If one uses the lower figures, say $500 per pre-school child, the total bill for enrichment and remedial programs for all two to five year olds would amount to $6.0 billion. If enrichment for remedial services were given to 25 per cent of all children in elementary and secondary school, the total bill at $150 per student would amount to another $6 billion.

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1. A Study of Selected Exemplary Programs for the Education of Disadvantaged Students, American Institutes for Research in the Behavioral Sciences, Palo Alto, 1968.

Challenges to Educational Research

A variety of issues need to be resolved by educators before large amounts of money are spent on special programs. The first problem is to make sure that the programs are effective. In education, as in life, you get your money's worth only if you are lucky. The second involves costs and priorities. In the short run, we spend only as much as we can spend wisely. In the long run, we may wish to seek new solutions to the problem of inequality. One could well envisage a situation where research goals for American educators were stated in terms of results at a given price, say teaching children of IQ 70, a year of reading in a year for no more than 20 per cent above the average school expenditure.

Breakthroughs in the effectiveness of educational techniques are more likely to be achieved if several changes take place in the thinking of the educational community. Given the probability of limited resources and the limited effectiveness of newly developed programs, a conscious choice will have to be made about the areas where inequality can be reduced. Instead of doing all things badly, we may have to decide which of the things it is most important to do well.

There have been encouraging signs that such a consensus may be developing. One step in this direction is the considerable attention which has been paid to instilling minimum competence in the "three R's." Narrowing the focus of educational experience in this way, in order to achieve higher levels of attainment, is likely to cause a

great deal of controversy. On one hand, voices will be raised that school is a social experience and that it is important to expose children to the total school program. On the other, educators may argue that it is destructive for a child to be exposed to a test in social science at a reading level two or three grade levels above the one he has attained. Some compromise will have to be reached between these two groups. I am fairly optimistic that a common purpose will be forged once it is realized that a child can be taught a great deal more after he has mastered basic skills.

This new common purpose will require new approaches on the part of educational researchers. Currently, the educational research community is deeply split. Academic research and school-based research have been conducted by two different groups, who can be arbitrarily divided into the elitist and the pragmatists. The elitists have been generally interested in the development of theories of learning, and in the organization and history of the educational process. By contrast, the more run-of-the-mill educational researchers have looked upon education as an applied field where "good ideas" were to be tested in a "real life" setting. There have been very few cooperative ventures between the two groups where the clearly stated purpose was the development of a curriculum which sets as its objective a given attainment by groups with stated learning rates in a stipulated period of time.

A plausible hypothesis is that the failure of so many curricular reforms in the past few years has been due to the narrow scope of the innovations. The large number of studies on reading which compared

one method with another found no significant difference in attainment between the experimental and control groups. Nor did the experiences with Individually Prescribed Instruction show noticeable improvements in the rate of achievement. It is quite possible that small-scale studies which compare heterogeneous experimental groups with equally heterogeneous control groups simply fail to pinpoint the type of curricula best suited for fast and slow learners. It is more likely, though, that the experimenters' approach to learning did not differ sufficiently from that used in the control groups to produce significant differences in results.

If one assumes that the learning process results from stimulants both inside and outside the school, and that the stimulants inside the school depend on a combination of classroom organization, curriculum materials, and teaching methods, one becomes pessimistic about the effects of changing just one or two of the ingredients in the classroom.[1] The topics most neglected by educators have been (1) the organization of the learning process within the classroom, and (2) the relationship of the school to the home. Some experiments in a "teaching for mastery" program sponsored by Professor Benjamin Bloom drastically altered the organization of the classroom with rather promising results. Continuous testing of the student's achievement was followed by remedial action, first through coaching by fellow-students, then through coaching by parents, and later, in cases of

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1. Dugan, Dennis J., "The Impact of Parental and Educational Investments Upon Educational Achievement," in Inequality: Studies in Elementary and Secondary Education, U. S. Office of Education, 1969 (mimeo).

continuous failure, by specialized remedial specialists. This increased the achievement rates dramatically. Professor Bloom believes that deliberately changing the classroom climate from a competitive to a cooperative mode also contributed significantly to the total involvement of students and hence to their improved performance.[1]

The interesting feature of this experiment is that it was based on certain theoretical postulates, in this case Carroll's.[2] Variable curricula were used to stimulate laggards, problems were diagnosed and treated differently, and the whole weight of the social organization of both school and home was brought to bear on improving the performance of slow learners.

Compared to this broad-gauged effort, most of the research in curriculum reform or teacher training sponsored by federal agencies appears to be narrowly based and not really designed to reduce the variability between learners. The development of Individually Prescribed Instruction, for instance, has remained fixed on ironing out training, administrative and curricula bugs, despite the fact that both control and experimental groups achieve equally. No drastic shake-up is anticipated. Another program, designed to retrain teachers through the use of video-tape and television instruction, is going on

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1. Bloom, Benjamin S., Stability and Change in Human Characteristics (New York: Wiley, 1964). See also, Bloom, Hastings and Madans, Handbook of Formative and Summative Evaluation of Student Learning (New York: McGraw Hill, 1970).

2. Carroll, John B., "A Model of School Learning," in Teachers College Record (Vol. 64, 1963), pp. 723-733; "Problems of Measurement Related to the Concept of Learning for Mastery," in Education Horizons (Vol. 48, 1970), pp. 71-80.

apace without any check as to whether the retrained teachers are more effective with students than they were before. Similarly disappointing stories can be told about most experiments with computer-aided instruction.

An observer of the educational scene has commented that many new developments in educational technology use sophisticated techniques to trivial ends. What is more important, the majority of new developments are tried for their own sake, without any set goals for the performance of children.

Under these circumstances, it is not surprising to find innovations in education adopted merely because they sound reasonable or attractive. Thus, the drive to bring male teachers into elementary schools in areas where broken families are prevalent was touted as a way to help boys find a male model who would substitute for a father. However, this easy solution was never checked with psychoanalysts, from whom the data was borrowed. Father figures are not substituted that easily.

Another popular innovation is the British "infant school," or "open classroom," now being adopted here with indifferent success. According to achievement tests administered in Great Britain, there is very little improvement, if any, in children's achievement rates due to this innovation. These disappointing results could have been expected, since the curriculum objectives of the open classroom are not generally different from those of the conventional classroom. Although children's motivation could increase somewhat in a non-regimented setting, this is likely to have negligble impact on the learning rate which they bring to school.

The sources of the current enthusiasm for this program must be sought in the ungainly development of American school administration and organization. Flexible scheduling, options, extracurricular activities, and other functions which were added to the school to make it more attractive have also complicated its administration. The nightmare of the overmanaged school, generally run by less-than-gifted administrators, has been described by Bel Kaufman in Up the Down Staircase. The contradiction and senselessness of many school procedures have also riled others. Even a generally dispassionate observer of the American scene, Charles Silberman, was shocked by the administrative incongruities in our schools.

Bringing a discussion of shortcomings and attempted reforms into the section on innovation and research goals would appear to be a gratuitous intrusion, were it not for the tendency of the single largest patron of innovation and research, the Federal Government, to pin its hopes of improvements in education on initiatives coming from the educational sector. The distribution of grants under Title III of the Elementary and Secondary School Act, and the recent attempts to sponsor 20 exemplary schools, are an indication that anything that seems intuitively attractive is likely to be supported, whether or not it is theoretically sound.

The most successful innovations will probably be those firmly based on broad-gauged research, with objectives clearly stated in terms of student outcomes. Cognitive, measurable outcomes are an important part of these objectives. It is also highly desirable that

the innovation and research be designed to document effective procedures that are priced reasonably enough so they can be adopted widely.

In all probability, a new teaching technology will have to be invented which will produce better results with the existing stock of teachers and administrators. If some preliminary calculations made on a highly tentative basis are correct, that technology will have to be four or five times as effective as the one used today. Unless the average Japanese student is very much brighter than the average American, this technology can be introduced without the use of any unusual gadgetry. Better organization of classes, better teaching and more reasonable curricula can do the trick.

Since everything is expensive in the U.S.A., the cost of these developments will probably be millions. However, when one realizes that close to $150 million is now available for various forms of evaluation, innovation and research, it becomes apparent that redirecting this sum to non-capricious use by a different group of researchers could turn the tide.

Resources and Their Management in Education

While more fundamental problems of organization are being solved, it is imperative to pay increased attention to the resources used in education. The most important of these resources is the teacher. More than two-thirds of the budget of elementary and secondary education is consumed by teacher salaries.

For the first time in decades, elementary and secondary administrators will be able to pick and choose among teachers in the 1970's. The teacher shortage is behind us, at least numerically. We are faced with a surplus of teachers.[1] By contrast, if moneys become available for pre-school education, we are not geared up to training teachers for this segment of our school population.

One important insight which we get from educational research of the 1960's concerns the characteristics of successful teachers. Study after study has confirmed that teachers with high verbal ability did a better job of teaching. Verbal ability was an extremely important attribute of teachers who were effective with poor students.

Since verbal ability is pre-determined well before a student enters a teacher-training course, one would expect these findings to affect the selection procedures of teacher-training institutions, and a major objective of the Education Professions Development Act to be the restructuring of selection and training practices so as to make them more attractive to gifted and verbal students.

Actually, nothing could be further from reality. A large part of the federal resources under this Act are channeled to recruiting sub-professional aides and facilitating their transition to wholly certified teachers. Little attention is paid to their verbal ability. The program is justified on the intuitively attractive, but never proven, premise that it is desirable to have teachers come from the same ethnic and social background as their students.

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1. U. S. Department of Health, Education, and Welfare, Office of Education, National Center for Educational Statistics, Projections of Educational Statistics to 1979-80, 1970 Edition, and The 1969 School Staffing Survey (unpublished tabulations).

In a way, educators have been taken in by their feeling of social responsibility. They feel that education should contribute to social mobility, and are trying to do it by training lower-class teachers. This type of romanticism may be quite unnecessary and even deleterious. Most teachers already come from a working class background, and if present trends continue, a very sizeable minority of teachers in the next 20 years will be black. Furthermore, educational funds are now so scarce that it makes little sense to allocate them to social programs. Ten times more money is spent on manpower training than on the development of teachers.

Some of the moneys so saved could be spent better on studies of human resources management. The schools' unnecessary restrictions on students, mentioned above, have serious effects on both student and teacher morale. It might be argued that we treat children as prisoners, and teachers as children. While this is no doubt an exaggeration, the schools' administrative practices do need review. So do personnel policies. It is important to retain gifted teachers, through selective merit promotions and appropriate career paths. Currently, however, promotion opportunities for good teachers lead only to administration.

More importantly, the whole system of elementary and secondary education needs to be given a hard look from a management viewpoint. We must decide which expenditures really make a difference as far as the behavior, attitude and performance of children are concerned. In addition, the emerging trend of accountability for school results

deserves to be encouraged. In no area in the public sector is the need for consumer protection more manifest, nor the demand for it growing so fast. Some serious attention to this topic could be encouraged through research funds.

TOWARDS THE ACHIEVEMENT OF EQUALITY

While the battle to achieve non-exclusiveness and universality of elementary and secondary education has been fought and won, the challenge of equalizing the outcomes of elementary and secondary education has not yet been met. There has been considerable confusion about the meaning of equality in elementary and secondary education. Some have defined equality in terms of attainment--number of years spent in school, or grade graduated. Others have argued that the achievement of different groups of the population, say the poor and the rich, the whites and the blacks, the northerners and the southerners, must be equalized, as measured by test scores. Still others have claimed that if the resources expended by each school district were made equal, or less disparate, a considerable contribution towards equality would be made.

Each of these arguments has some merit, but it is doubtful that any of these goals can be achieved, or that some should be achieved under present circumstances. This section of the report will discuss how important each of the views is to the achievement of equality of opportunity in life, as predetermined by the pattern of elementary and secondary education available to different groups.

Equality of Coverage and Equality of Attainment

The 1970 estimates of attendance rates of children aged three to 19 indicate that 78.8 per cent of both whites and Negroes in that age group were enrolled in some school below the college level. This may seem to be a heartening statistic, and in some ways it is, but it does require additional commentary.

At first blush it would imply that the blacks and the whites are likely to graduate from high school at the same rate. This is patently untrue. We know from the various surveys that blacks are poorer than whites. We also know that poor children start their education later (in 1969 only 23 per cent of children age three to five from families with incomes below $3,000 were in pre-primary school, as contrasted to 43 per cent of those from families with incomes of $10,000 or more)[1] and are likely to be older than the average child in the grade. In 1960, the last year for which this information is available, 37 per cent of all children age 10-13 from families with less than $3,000 income were older than the modal (average) age for the grade, as contrasted to 4 per cent of children with parents whose income was more than $7,000. Also, two-thirds of all poor children age 18 and 19 in school were still in high school, as contrasted to only one rich child in six.[2]

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1. U. S. Department of Health, Education, and Welfare, Office of Education, National Center for Educational Statistics, Preprimary Enrollment, October 1969 (Washington, D.C.: Government Printing Office, 1970), Table 3.

2. U. S. Bureau of the Census, Current Population Reports, Series P-20, No. 132, "Education of Fathers and Sons" (Washington, D.C.: Government Printing Office, 1965).

There is no readily published information on the graduation rates of blacks, but based on the projection of past trends, it is probable that by 1970 70 per cent of black youngsters of high school age will complete four years of high school by age 25, as contrasted to 80 per cent of the whites. Some other minorities' lag is even more pronounced. According to a study by the Civil Rights Commission, only 60 per cent of children with Spanish surnames in the five Southwestern states graduate from high school.[1]

A rough analysis by this writer of 14- to 19-year-old children who were neither high school graduates nor enrolled in school showed that children from poor families were overrepresented in this group by a factor of 1.5. This analysis is conservative, inasmuch as it assumes that the proportion of poor children to all children is the same at all ages. Whatever fragmentary data does exist indicates that the proportion of poor children to total children decreases with age. This can be explained by the hypothesis that many breadwinners improve their earnings as they grow older.

Table 5, which shows the high school attendance rates of 15- to 19-year-olds for 1960 and for the average of 1967-69 can be used as an indicator of the success of schools in different regions of the country in retaining students. The third column in Table 5 shows the gains from beginning to end of the period. From this table, one may conclude that while the South is still lagging in retention, the problem of retention will be greatly attenuated if past trends continue. The challenge to education is more serious elsewhere.

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1. U. S. Commission on Civil Rights, The Unfinished Education: Outcomes for Minorities in the Five Southwestern States, Mexican-American Educational Series, Report II, October 1971.

TABLE 5

ENROLLMENT OF 15-19-YEAR-OLDS IN HIGH SCHOOL
1960 AND 1967-69 AVERAGE, BY REGION

	1960	1967-69	Difference
Northeast	.582	.599	.017
North Central	.602	.618	.016
South	.533	.583	.050
West	.608	.632	.024
U.S.	.575	.605	.030

Source: Joseph Froomkin, J. R. Endriss, Robert W. Stump, "Population, Enrollment and Costs of Public Elementary and Secondary Education 1975-76 and 1980-81," a report submitted to the President's Commission on School Finance, December 1971.

Equality of Achievement

In present circumstances it is much more important to focus upon the achievement of students than upon the number of years they spend in school. There is increasing evidence that the democratization of the high school has not paid off as much in narrowing differences in achievement as it has in equalizing the number of years of school completed.

Thus, an imaginative and unpublished study of the Equal Opportunity Survey by Tetsuo Okada, of the U. S. Office of Education, which attempted to bring to a common denominator the achievement of students in various racial groups at grades 9 through 12, indicated that gains by blacks and Spanish-Americans on the tests were small in these four years, as compared to significant gains by whites.

There has been considerable discussion of schools as a neutral filter, which does not improve the relative position of the poor compared to the rich. One of the most crucial demonstrations of this proposition, by R. Marston Case, was cited above.

Another way of looking at inequalities in achievement is to differentiate achievement levels by race, keeping other factors constant. A statistical study estimated, for instance, that half of the difference in white and Negro scores could be explained by income differences,[1] and the other half was unexplained. In a later study, George Mayeske[2] tried to explain differences in scores between majority

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1. Richard O'Brien, "White and Negro Scholastic Achievement in Relation to Family Income," in Inequality: Studies in Elementary and Secondary Education, U. S. Department of Health, Education, and Welfare, Office of Education, 1969 (mimeo).

2. George W. Mayeske, "On the Explanation of Racial-Ethnic Group Differences in Achievement Test Scores," paper presented at the Annual Meetings of the American Psychological Association, Washington, D.C., 1971.

and minority groups of equal socioeconomic status. He came to the conclusion that family styles, the number of books in the home, and the different attitudes of parents accounted for practically all the difference in scores between whites and blacks, and most of the differences between whites and other races.

If the multi-culturalism which has persisted in the melting-pot culture affects the atmosphere, the aspirations, and hence the performance of different groups so drastically, a neutral policy will not equalize achievement. The school must then be organized in such a way as to compensate for the deficiencies of the home. Parenthetically, one could point out that aspirations for education are not equalized among whites either. A recent Census study showed that persons of Russian descent were more likely to attend college than descendants of any other national group.[1] The school could do more to motivate children from various groups, even among whites.

The dimension of the problem of equalizing achievement, or the gap between present achievement and what may be desirable, has always been stated in terms of averages. Goals for the improvement of the performance of disadvantaged students have often been specified as bringing the mean of the group up to the national average. This is not ambitious enough a goal. A better statement of the target is to eliminate the lag in achievement due to environmental deprivation. Thus, a better equalizing standard would be a comparison of the attainment of poor children with that of children in the suburbs.

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1. U. S. Bureau of the Census, Current Population Reports, Series P-20, No. 220, "Ethnic Origin and Educational Attainment, November 1969" (Washington, D.C.: Government Printing Office, 1971), Figure 1.

If stated this way, the gap would be increased by roughly one-half of one standard deviation.

In central cities, 40 per cent more children lag behind the mean than in the suburbs, and the rural districts have half again as many as the suburbs. These lags are only partially explained by the concentration of minority students. As of the fall of 1969, the largest concentration of minorities was estimated to be in central cities. The lowest academic performance was in rural areas, where poverty was most prevalent. Estimates of minority groups and per cent of children in poverty are shown in Table 6.

Equalization of Funds or Resources

As a general rule, the resources are greatest in the richest communities, where the achievement is highest. Those are precisely the communities where the environment and the family atmosphere, at least until recently, encouraged perseverance in school and high attainment.

In view of the recent decisions of courts in California, Minnesota and Texas, the whole issue of equalization of resources has taken on a new timeliness. As desirable as the equalization of resources may be for aesthetic and humanitarian reasons, it is important to understand to what extent redistribution is likely to contribute to greater resources for poorer communities, and to what extent small increments of resources are likely to contribute to the equalization of outcomes.

TABLE 6

MINORITY STUDENTS AND INCIDENCE OF POVERTY
BY TYPE OF SCHOOL DISTRICT, 1969

(Percent of Total)

	Students in Public Schools		All Children
	Negro	Spanish Surname	Poor
Central Cities	29.7	7.2	16.3
Other SMSA	5.3	4.0	6.8
Non-SMSA	12.8	2.6	19.1
U. S. Total	15.2	4.5	14.1

Source: Minority students reported by school principals in The 1969 School Staffing Survey conducted by the National Center for Educational Statistics, Office of Education, unpublished tabulation; poor children as reported in U. S. Bureau of Census, Current Population Reports, Series P-60, No. 76, "24 Million Americans--Poverty in the United States: 1969" (Washington, D.C.: Government Printing Office, 1970), Table 3, with adjustment from type of residence to type of school district.

An examination of national averages of expenditures by type of district, within region, based on a composite national sample of districts, indicates that the expenditures in predominantly suburban, i.e., non-central city standard metropolitan area districts, were some 10 per cent higher per student than in central cities, and 20 per cent higher than in non-standard metropolitan statistical areas.

The opportunity to "soak the rich" to contribute to the poor is extremely limited. This becomes obvious if one looks beyond the levels of per-pupil expenditure in a few very rich districts, e.g., Beverly Hills in California, or Scarsdale and Great Neck in New York, and examines the amounts expended in representative, randomly-chosen districts in a number of large cities and surrounding areas.

A study of the expenditures on education of five large cities and their suburbs, when the suburbs were selected on a random basis, shows that in the South and West suburbs do not spend appreciably more than cities. While expenditures in central cities and suburbs were more or less equal, the share of expenditures covered by state reimbursement is higher for suburban districts.[1]

A much more comprehensive study, which examined the allocation of state funds for all 50 states showed a wide disparity in the operation of the formula. In some states, especially on the Eastern seaboard (with the exception of Massachusetts), state subsidies were higher on an ADA basis for all districts except central cities. In the Midwest and the West, rural areas were favored, at the expense of both central

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1. Esther O. Tron, "An Analysis of Public School Current Receipts and Expenditures of Selected Major Cities and Suburbs in the U.S.A. 1965 to 1968," Inequality, loc. cit.

cities and suburbs.[1]

The dilemma which was illustrated in the Serrano case is that while rich districts do get something from the state, and poor districts do get more, this is not nearly enough to equalize the outlays on education.

The real issue is perhaps stated better in terms of physical resources rather than expenditure levels. As a result of circumstances, salaries and other expenditures differ considerably by type of district. As a general rule, central city school districts pay more to teachers than rural districts, and suburban districts sometimes have higher, and sometimes lower salary outlays per teacher than central city school districts. Thus, the equalization of outlays for a given state, or region, may still result in unequal distribution of resources, with equal distributions of moneys. For instance, in the case of central cities, as compared to rural districts, an equal amount of money available for education will result in a full 10 to 15 per cent higher class size, if all other costs are equal. This assertion is based on the fact that central city teacher salaries in 1968-69 averaged $8,363 and $7,180 in non-SMSA districts.

The Serrano decision does not address the problem of "municipal" overburden either. Thus, if the cost of operating city services is higher per dollar of assessed valuation, the equalization of contributions, although it will help central cities, on the average, will not begin to meet the fiscal pressures which are placed on them.

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1. Murray Spitzer, Michael C. Bernstein and John T. Hudman, "State Public School Finance Programs in Perspective," Inequality: Studies in Elementary and Secondary Education, U. S. Department of Health, Education, and Welfare, Office of Education, Office of Program Planning and Evaluation, 1969 (mimeo).

In summary, the scaling of state contributions to equalize contributions per student must (a) reduce the amounts going to rural areas, and (b) benefit some cities and suburbs while penalizing others. Undoubtedly, if Serrano-type decisions become the law of the land, considerable reshuffling will occur in state plan provisions for the aid of education. A priori, though, it is not at all clear whether equity will be restored, unless special costs and cost patterns are taken into account.

Special Costs - The Vexing Problem of Remediation

The amount of money which would be required by a locality to bring about equality of achievement is indeed moot. A review of Title I programs does not help determine what ought to be spent to buy an improvement in the achievement levels of disadvantaged students.

As one of the earlier reviews of Title I programs indicated, similar programs with relatively equal amounts of expenditure and with remedial content which looked very much alike were successful in some grades in the same district, and not in others. The variation in effectiveness across districts was also extremely pronounced.[1]

A review of exemplary programs for disadvantaged children conducted under contract to the U. S. Office of Education by the American Institutes for Research gave a wide range of possible expenditures for those programs which it found effective. For preschool programs, the costs cited were between $500 and $1,000 per

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1. A number of evaluations of Title I have been mimeographed by the U. S. Office of Education. They are available from the Bureau of Elementary and Secondary Education.

child. For grade school programs, the cost ranged from a low of $83 to $540. A number of effective programs appear to have cost $150 to $300 per child.[1]

It is not at all clear what made the selected programs effective, as contrasted to those which were not. Most of the effective programs were highly structured, well-documented, well thought out and, from the informal impressions of the interviewers communicated to this writer, headed by an unusually capable and dedicated individual.

The chemistry of successful remedial programs has not been analyzed closely. Most of the experiments in remediation and enrichment are based on unrigorously stated hypotheses. Perhaps no more can be asked in as complicated a field as human development, yet the impression remains that most projects follow the predilections of their sponsors rather than a consistent set of theories.

A number of experiments with positive results have been mounted to reach the badly motivated. When disadvantaged older children were employed to tutor younger children, there was a positive effect on the achievement of the tutors. "Street-corner academies," high schools which re-enrolled repentant dropouts and allowed them to learn in stimulating environments also appear to have done well by the students. A small pilot project in Harlem which features a highly achievement-oriented open classroom is also reported to have produced encouraging results.

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1. Department of Health, Education, and Welfare, Office of Education, Office of Program Planning and Evaluation, A Study of Selected Exemplary Programs for the Education of Disadvantaged Children, September 1968 (mimeo).

For the majority of disadvantaged and minority children, the school must shoulder a much greater burden if they are to achieve success in learning. The parents of these children have spent fewer years in school than the average, and many of them have attended sub-standard schools during the years they did receive their education. Hence, in many instances they are less able to complement the task of the school. Most middle-class parents help their children with their homework, or drill them in some school subjects, but a large number of disadvantaged children do not have the benefit of this supportive activity.

The other side of the coin, the so-called learning rate, has received more attention lately. As a proxy for the learning rate, we use measured intelligence. Recently we have been treated to a controversy about the inheritability of intelligence, with the proponents of one point of view claiming (1) that the poor and minority groups probably inherited a lower level of intelligence; and (2) that programs designed to increase the intelligence of the general population would probably result in even higher polarization of IQ levels between the children of the smart and relatively affluent, and the poor and minority populations whose performance on tests is less spectacular. This point of view is not accepted by all psychologists.

This writer believes that positive public policy dedicated to increasing equality should encourage the development of programs to maximize learning rates. First, successful intervention will raise the average learning rate of the disadvantaged and minority groups, and will allow them to compete more successfully in modern society.

Second, it is not at all clear that the creation of environments which stimulate maximum development of learning rates are likely to benefit the advantaged as much or more than the disadvantaged. The enriched environments offered to all children (1) may not be very different from the ones which are enjoyed by the children of the well-to-do, and (2) the law of diminishing returns may very well apply, with the consequence that the learning rate of the disadvantaged is likely to increase much more than that of children from more favored backgrounds.

If one agrees with the proposition that an important objective of public policy is to raise the learning rate of the disadvantaged and of minorities, it would be wise to sponsor those activities which have the maximum impact in affecting this learning rate. The more commonly accepted postulates in developmental theory would then prompt one to sponsor activities which affect the environment of very young children. Thus, Benjamin Bloom has asserted that half of the traits which affect intelligence are acquired by the age of four. Even more dramatically, the recent research of Burton White suggests the tantalizing possibility that the very roots of motivation and competence are established between the 12th and 18th month of life.

Very early childhood is generally outside of the scope of conventional education. The children are considered too young. What is more, whenever we have had slight indications of success in changing the learning rate of young children, the methods used were not in the mainstream of educational practice. We are accustomed to delivering our education to groups of children; success with young

children was achieved by one-to-one intervention. Most of our education is didactic--teachers tell students what to do. Successful parent-training programs produce desirable changes in parent behavior by enabling mothers to watch and imitate a social worker or visitor, rather than being told what to do. If conventional teaching techniques are not effective, it may be wise to keep the early education establishment separate and to fence off pre-nursery and nursery education.

In summary, every theoretical consideration leads one to conclude that reducing inequality in achievement and attainment will require the infusion of additional resources for the education of poorer and minority children. In practice, much of the money expended to date has not produced the improvement expected. It would also seem that, as has often been the case, the effects of early stimulation have been dissipated if not followed up during later years. The lack of support and reinforcement from the family probably accounted for the dissipated gains. In the case of some disadvantaged children, the need is not to substitute for all family functions, but rather to reinforce through outside forces those functions which the family does not know how to perform. New ways of compensating for adverse environmental effects have to be devised. Old ones too often don't work. Also much remains to be done to package remedial programs. An outline of possible approaches was discussed in the section on educational research.

Money Versus Organization

Money is a necessary but not sufficient condition to produce equality of attainment and achievement. To reach that goal it will be necessary to mount a considerable drive to redesign the educational establishment so as to make it deliver knowledge and motivation to the disadvantaged.

This drive will not be mounted unless the financial crisis of education is moderated. As was mentioned at the beginning of this paper, much of the energy of educational administrators is now directed to balancing budgets. Under these circumstances, they can no longer devote their attention and resources to changing the system.

A fundamental point must be made about the nature of the financial crisis: it has been accentuated by inflation. While the property tax base--the source for most tax levies--has responded slowly to reassessments due to changes in price level, concurrently, the costs of educational inputs have been pushed to higher levels due to general price increases over and above increases in real wages for teachers, and due to faster-than-average increases in the prices of other goods purchased by schools. Furthermore, enrollments have been growing and class size has been decreasing. In the crudest terms, the productivity of education has been declining while the volume has been growing.

It is quite likely that in the course of the next few years the number of children enrolled in public schools will continue to inch upward. If pre-school enrollments continue to grow and private school enrollments keep on declining, there may be some 1.7 million more

students enrolled in elementary and secondary schools in 1975-76 than in 1970-71. Between 1975-76 and 1980-81, enrollments are more likely to stabilize at the 1975-76 levels.

If this writer's projections are correct, the costs of public elementary and secondary education will be going up 5 to 6 per cent in real terms every year until 1975-76, and some 4 per cent a year for the five years thereafter (see Table 7). The issue is to what extent traditional financing of education can bear those increased costs.

Most writers on public finance have been pessimistic about the ability of state and local tax systems to continue shouldering these increased outlays. Especially if inflation continues, the property tax base will be found more and more wanting. Furthermore, there is increasing dissatisfaction with the inequalities of resources region by region, state by state, and type of locality by type of locality.

These differences are far from trivial. In 1967-68, some $755 in current outlays were expended on a public school child in the Northeast. This compared with $591 in the North Central region, $469 in the South and $629 in the West. Nationally, central cities and suburbs spent roughly equivalent amounts, $618 and $628 per student, respectively. The expenditures in non-metropolitan districts were considerably lower, $536 per student. In all regions the average expenditures of cities and suburbs were within $50 of each other, with central cities spending more in all regions except the South. The gap between central cities and non-metropolitan areas was roughly 10 per cent in all regions, except for the Northeast where the non-metropolitan districts spent 15 per cent less.

TABLE 7

PUBLIC SCHOOL ENROLLMENT AND CURRENT EXPENDITURES
IN 1975-76 AND 1980-81 AS PER CENT OF 1967-68

Region	Public School Enrollment		Current Expenditures			
			Total Cost		Per Pupil	
	1975-76	1980-81	1975-76	1980-81	1975-76	1980-81
NORTHEAST						
Central Cities	96.0	94.3	137.3	152.7	143.0	161.9
Other SMSA	120.7	124.9	172.5	202.7	142.9	162.2
Non-SMSA	116.9	116.2	167.5	187.3	143.2	161.1
TOTAL	112.0	113.3	159.6	182.8	142.5	161.4
NORTH CENTRAL						
Central Cities	90.0	87.6	129.4	143.2	143.7	163.4
Other SMSA	123.8	127.9	178.8	209.7	144.4	164.0
Non-SMSA	100.0	94.1	141.5	151.6	141.5	161.1
TOTAL	105.6	104.3	150.9	169.5	142.9	162.6
SOUTH						
Central Cities	97.3	96.4	150.3	177.8	154.5	184.5
Other SMSA	116.5	125.0	177.9	225.6	152.7	180.5
Non-SMSA	109.2	100.4	163.2	182.1	149.5	181.4
TOTAL	106.4	103.9	161.6	189.9	151.9	182.7
WEST						
Central Cities	107.1	110.4	148.2	170.2	138.4	154.1
Other SMSA	128.2	139.5	180.3	217.8	140.7	156.1
Non-SMSA	91.0	86.8	128.3	136.5	141.0	157.3
TOTAL	111.1	115.6	155.6	180.2	140.1	155.8
All Central Cities	97.1	96.5	141.1	160.8	145.3	166.6
All Other SMSA	122.4	129.0	176.7	211.4	144.4	163.9
All Non-SMSA	104.9	98.8	151.6	166.2	144.4	168.2
TOTAL U.S.	108.2	108.1	156.9	180.3	145.0	166.8

Source: Joseph Froomkin, J. R. Endriss and Robert W. Stump, "Population, Enrollment and Costs of Public Elementary and Secondary Education 1975-76 and 1980-81," a report submitted to the President's Commission on School Finance, December 1971.

The equalization of resources to provide all localities with equal dollars for education would apparently have to be made at the expense of central cities and suburbs. This is not a practical solution since big city school finances are already strained. As a general rule, the opportunities for soaking rich suburbs to subsidize large cities and rural areas are extremely limited. For every affluent bedroom community, there are two or three suburbs peopled by persons with modest incomes, living in communities where the tax base is restricted.

In all probability, the Federal Government will have to increase its contribution to the financing of education. At the same time, it would be well for Congress to exercise its initiative to encourage states to reform their formulae for the aid of education so that they are tailored more closely to the ability of individual communities to raise taxes.

If federal aid to education is increased, it may be desirable to channel it in such a way that the federal contribution makes it possible for localities to underwrite the average cost of education and tax themselves no more than their neighbors. Furthermore, the federal contribution, possibly channeled through the states, would only go to those districts where the tax rate at some pre-determined level still fell short of the average expenditure in the state. In order to encourage better state equalization, funds would be withheld from states which contributed more to school districts than their paid share, as outlined in the federal legislation.

The aid could work as follows: (1) Federal contribution to states would be determined by multiplying the average daily attendance of students by a pre-determined average cost of education figure. From this figure would be subtracted some percentage of the state income. The difference between the two figures would determine the amount of money given to the state. (2) Assure that federal moneys were distributed to localities equitably. The contribution to the state would be reduced by the amount paid to any school district in excess of what the school district would receive if the allocation were based upon the average cost of education (possibly adjusted by rural/urban differences in cost factors) and what the locality could afford by taxing itself at the average tax rate. The sum would be further reduced if the state shortchanged school districts which were entitled to aid under the formulae but failed to receive it.

The total amount to be allocated to states could start at a significant sum, say $5 billion, and could be increased by an amount equal to $2 billion a year, until the Federal Government covered an average of 20 or 30 per cent of all elementary and secondary school expenditures. This program would make it possible for practically all communities to afford good schools.

Concurrently with meeting this objective, the Federal Government may also wish to focus on subsidizing improvements in the education of the poor and of minority populations. Locally, aid should go only to those communities which have more than their share of these target groups. The impact of legislation such as Title I ESEA could be

sharpened considerably if the funds were concentrated and channeled to those communities which really bore the extra burden of having higher-than-average concentrations of disadvantaged children. Thus, in 1969, less than 7.5 per cent of all children in suburbs were estimated to live in families below the poverty level. The percentage of all such children in the U. S. was 15 per cent. If funds were allotted only to those localities where at least 7.5 per cent of the children were poor, the incongruous practice of reimbursing affluent communities would cease.

Even if the funds were to be concentrated, the way they were channeled and disbursed would make a difference. When Title I ESEA was first funded, most federal administrators believed that a general infusion of funds would improve educational practices and achievements in school districts with high concentration of poor children. Experience did not bear out this belief. In the course of the past four years, the U. S. Office of Education has been trying to encourage local educational authorities to concentrate the funds on the education of poor pupils at the exclusion of others. Some educators have opposed this practice because they believe that a dual educational system, one for the poor and another for the rich, is being established under federal auspices.

While their point is well taken, our previous discussion led us to the inescapable conclusion that the handicaps under which the disadvantaged labored were serious enough to require drastic action. It was argued above that they needed exposure to cognitive stimulation

early in life, and that throughout elementary and secondary school their learning environment had to be reinforced. Under these circumstances, it would appear reasonable for the federal interest to encourage the establishment of additional remedial and reinforcement institutions to bolster the achievement rate of the disadvantaged. These institutions could operate side by side with the school, and supplement ordinary school services.

It seems sensible to concentrate federal moneys for the disadvantaged on, say, the hiring of reading specialists, rather than reducing class size. A school can employ a specialist full-time for less than it costs to reduce the pupil/teacher ratio by 2 or 3. It also makes sense to establish special institutions in addition to the school. After-hours study centers could be set up or, perhaps, poor children requiring special services could benefit from the same privileges of release time as do Catholics in some city schools.

There are considerable advantages to continuity in remedial programs, as long as a diversity of approaches is encouraged. While many of the approaches being tried today may work at cross purposes, if they "treat" the same student, they may be quite effective if applied consistently. Yet this consistency is hard to achieve if the remedial program is school-based. A study commissioned by the Office of Economic Opportunity estimated that 80 per cent of slum dwellers started and finished their education in the same school district.[1] However, the proportion of disadvantaged children who

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1. Office of Economic Opportunity, "In the Streets," 1971 (mimeo).

change school buildings each year may reach as high as 30 per cent.[1] Hence, difficult choices must be made: either to introduce consistent approaches within a district, or to ensure that a consistent approach is used with each child needing help.

In the past two or three years there has been considerable discussion about increasing the emphasis on accountability of teachers and administrators in elementary and secondary schools. The splitting of the responsibility for ordinary schooling and remedial education, it can be argued, goes against this trend. This is a mistaken impression. On the contrary, the orchestration of both phases of a disadvantaged child's education requires management, and if a class of managers is created for this purpose, accountability can be their responsibility. It is not too much to hope that this class of supervisors of instruction may form a nucleus of expertise and advocacy for the effective education of those groups who do not benefit from education as much as is desirable. It can be argued that the absence of this new class of educators has been a retarding influence upon the development of effective methods to educate that portion of the population which is lagging in both attainment and achievement.

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1. Department of Health, Education, and Welfare, Office of Education, National Center for Educational Statistics, The 1969 School Staffing Survey, unpublished tabulations.

Sharing the Burden of Financing

The total amount necessary to finance an effective elementary and secondary system will depend upon (1) the number of students enrolled, (2) the wages and costs of educating children, and (3) the additional costs of providing effective programs for that part of the population which is lagging in achievement because additional services are not provided to offset environmental deprivation.

It was mentioned that the number of students will not increase linearly during the decade of the 1970's. Even if sufficient money is found to expand pre-school, if the dropout rate in high school continues declining and if enrollments in private schools decline, after some small increase in the course of the next three or four years, it is likely that the public school population will level off. Thus, the pressure on school finances from increased enrollments will moderate in the course of the next few years.

There is much less certainty about the course of wages and other costs. With the easing of the supply of new teachers, it is quite likely that the increases in real wages of teachers will not exceed the growth of the average wage level. Thus, teacher salaries which increased at the rate of 3.2 per cent in real terms during the 1960's may grow no faster than 2.5 per cent in the 1970's. Because inflation is endemic in our economy, an additional 2.5 to 4.0 per cent a year must be added to this figure to translate the wage increases into current dollars. Other current costs of education increase roughly only 1 per cent faster than the price level, because the general price rise plays a more important role in determining the level of these costs.

Finally, the extent of additional resources for remediation and motivational support will depend upon how fast proven techniques are developed. In the long run, as much as 10 per cent of the school budget could be allocated to this purpose if the right techniques are developed.

The role of the Federal Government in meeting the financial crisis of education may be looked at from a number of different angles: (1) the Federal Government may wish to relieve the pressure on local governments, especially to transfer the burden of property taxes; (2) the Federal Government may further wish to assume either (a) the increase in the real burden of educational expenditures, and thus contribute money to districts in proportion to the increase in enrollment and the increase in real costs, or (b) the burden of all price increases, including those caused by inflation, thus decreasing, in the long run, the real burden of local taxation; and (3) the Federal Government may wish to underwrite part or all of the cost of programs for lagging students. In this last instance, it would be well if some standards of quality control were worked out between the Federal Government and local authorities.

Under all these circumstances the additional moneys required are not likely to grow linearly, or be tied directly to some economic indicator, such as gross national product or value added. Hence, any earmarked tax is likely to produce too much revenue in one year, and too little in another, or more specifically, enough revenue early in the decade and too much by the end of the 1970's. This would cause a waste of resources or too high an increase in prices.

Proposals for the complete substitution of property taxes by some other tax must be looked at especially carefully. Much of the burden of property taxes today has been capitalized, i.e., their burden depresses the value of property. Their removal and substitution by a sales, turnover or value added tax will benefit those groups in the economy who own more than their proportional share in property. Most of the windfall will accrue to the moneyed classes, while the burden of some form of the value added tax will fall on consumers, the poor, and the middle classes. Altering the tax system is a complex job, and given the amount of moneys to be raised, it may not be worthwhile.

Conclusion

This paper has sketched out the dimensions of the current crisis in education, particularly as it relates to improving the delivery of services to minority groups. It has stressed that significant steps in producing greater equality in achievement and attainment are not likely to be taken unless the overall financial crisis is resolved.

It has also been emphasized that effective methods for the education of minorities, which can be replicated on a mass scale, do not exist today. Methods which seemed promising when implemented on a small scale have generally failed when tried on a mass basis. The growing disenchantment with performance contracting is a corroboration of the postulates advanced in this study.

No magic solution, be it community control, enrichment or nutrition, is likely to overcome the road-blocks to an effective education of minorities. It was argued in the body of this report that the causes of the inequality in achievement are very serious, and that only broad-based, theoretically sound prescriptions are likely to work.

In this connection it was suggested that better and more forceful methodologies must be developed to permit minority students to acquire knowledge. Unfortunately, past attempts to develop these methodologies have failed. For the next round of educational research and development it may be wise to enlist the help of a new group of academic researchers with somewhat broader skills and greater regard for theory. The identification and the recruitment of such people can be done only by someone both deeply committed to producing educational innovations which are effective, and highly respected by academics.

It was also argued that a well-defined group of professionals concerned with the education of minorities should be developed and made responsible for the progress of their charges. The challenge placed before these professionals would be formidable. Their training should be equal to the challenge.

Perhaps they could operate more effectively in special institutions devoted to the development, remediation and enrichment of education of poor and minority students. The reasons for establishing these special institutions are two-fold: (1) Leadership

plays a very important role in ensuring the effectiveness of programs for improving the achievement of the poor. Leadership is always in short supply and should be concentrated where it can do most good. (2) If true integration of races and social classes is to have a chance, it is important that not only schools, but also classrooms be integrated. In order to mix children from various socio-economic classes and races in the same room without watering down the curriculum, additional services, outside the classroom, may be required for lagging students. A commitment to keeping academic standards high and to preventing the flight of high-status and white majorities from integrated settings can be made only if parallel remedial and enrichment institutions are established.

It makes eminently good sense that in our system where rewards are scaled to performance, special constituencies and institutions be developed to take over the responsibility of preventing the poor and minorities from lagging behind majority students. The visibility of these groups and institutions may be the needed spur to a breakthrough in the organization of education.

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